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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,549	03/31/2004	Pavel Tichy	03AB064	7400

63122 7590 10/05/2006

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EXAMINER

PHAM, THOMAS K

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/814,549	<b>Applicant(s)</b> TICHY ET AL.	
	<b>Examiner</b> Thomas K. Pham	<b>Art Unit</b> 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 12, 14, 16-19, 22-28 and 30 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 13, 15, 20, 21 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**Response to Amendment**

1. This is in response to the amendment filed 07/19/2006.
2. Claims 9, 10, 13, 15, 20, 21 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. Applicants' arguments, with respect the new issues of claims 1, 23 and 28, necessitated the new ground(s) of rejection presented in this Office action.

**Quotations of U.S. Code Title 35**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claim Rejections - 35 USC § 102**

5. Claims 1-8, 11, 12, 14, 16-19, 22-28 and 30 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,266,805 ("Nwana").

**Regarding claim 1**

Nwana teaches a system for allowing a user to interact with a multi-agent distributed control system (see abstract and C 2 L 58-63), the system comprising:

- a computerized terminal on which is displayed a user interface (see C 2 L 44-49),
- wherein the user interface includes a first window displaying a workflow among a first plurality of agents of the multi-agent system (see FIG. 12 and C 35 L 16-54) wherein the workflow shows agents visually linked with respect to planning, commitment or execution of work under taken by the agents in effecting the distributed control (see C 36 L 38-60).

**Regarding claim 23**

Nwana teaches a distributed control system comprising:

- a network (see C 4 L 49-52);
- a plurality of controllers programmed with a plurality of agents, wherein the controllers are in communication with one another by way of the network (see C 4 L 53-65); and
- a terminal coupled to the network and capable of providing a human machine interface (HMI) (see C 2 L 44-49), wherein the HMI displays a plurality of windows on which are displayed information regarding at least some of the agents, a plurality of messages communicated among at least some of the agents, and a workflow occurring among at least some of the agents (see FIG. 12 and C 35 L 16-54) wherein the workflow shows

agents visually linked with respect to planning, commitment or execution of work under taken by the agents in effecting the distributed control (see C 36 L 38-60).

**Regarding claim 28**

Nwana teaches a method of interacting with a multi-agent distributed control system employing a plurality of controllers on which are programmed a plurality of agents, the controllers being coupled by a network (see C 4 L 53-65), the method comprising:

- providing a computer program capable of operating a user interface, wherein the computer program is in communication with the agents via the network (see C 2 L 44-49); and
- displaying agent-related information on the user interface by way of a plurality of windows, wherein within a first of the windows is further displayed a workflow among at least some of the agents (see FIG. 12 and C 35 L 16-54) wherein the workflow shows agents visually linked with respect to planning, commitment or execution of work under taken by the agents in effecting the distributed control (see C 36 L 38-60), and within a second of the windows is further displayed at least one of a plurality of messages communicated among at least some of the agents, a work unit requested by at least one of the agents, and message content associated with at least one of the messages (see C 36 L 7-22).

**Regarding claim 2**

Nwana teaches the workflow is displayed as a tree-type diagram linking a primary agent of the first plurality of agents and at least one secondary agent of the first plurality of agents (see FIG.

Art Unit: 2121

11), wherein the primary agent created a work request and the at least one secondary agent performed at least one of planning, commitment or execution of work in response to the work request (see C 5 L 10-24).

**Regarding claim 3**

Nwana teaches the at least one secondary agent includes a second plurality of agents (see C 4 L 61-65).

**Regarding claim 4**

Nwana teaches the tree-type diagram includes the primary agent, a first layer of the secondary agents that are directly in communication with the primary agent and a second layer of the secondary agents that are directly in communication with the secondary agents of the first layer (see C 23 L 28-35).

**Regarding claim 5**

Nwana teaches the tree-type diagram includes a first plurality of arrows connecting the primary agent to each of the secondary agents of the first layer, and a second plurality of arrows connecting the secondary agents of the first layer with the secondary agents of the second layer, and wherein each of the arrows represents at least one message between a respective pair of the agents (see C 23 L 39-63).

**Regarding claim 6**

Nwana teaches one of the arrows represents a plurality of messages, the messages of the plurality are also listed in the first window (see C 35 L 16-22).

**Regarding claim 7**

Art Unit: 2121

Nwana teaches the user interface further includes at least one of: a second window displaying a first list of messages sent between pairs of agents of one of the first plurality of agents and a second plurality of agents of the multi-agent system (see C 36 L 7-13); and a third window displaying a second list of work units requested by at least one of the agents of the first and second pluralities of agents (see C 36 L 23-29).

**Regarding claim 8**

Nwana teaches the user interface includes both of the first and second windows displaying the first and second lists (see FIG. 14).

**Regarding claim 11**

Nwana teaches the user interface includes the third window, wherein the third window displays descriptive information along with the listed work units, and wherein the descriptive information includes at least one of work unit identifiers corresponding to the listed work units, names corresponding to the listed work units, numbers of messages belonging to the listed work units, original requesters corresponding to the listed work units, and status indications corresponding to the listed work units (see C 32 L 57-67).

**Regarding claim 12**

Nwana teaches the user interface additionally includes a fourth window that displays content of at least one selected message (see C 36 L 7-13).

**Regarding claim 14**

Nwana teaches the user interface includes a second window displaying additional information, and wherein the displaying of information in the first and second windows is coordinated so that, when a user input is received in relation to certain information displayed in one of the windows,

Art Unit: 2121

at least some of the information displayed in the other of the windows is varied (see C 35 L 16-54).

**Regarding claim 16**

Nwana teaches further comprising a filter, wherein the filter is capable of at least one of: causing at least one of the first window and a second window to display only a subset of the first plurality of agents (see C 35 L 60 to C 36 L 6); and causing at least one of the first and second windows to display only a subset of messages occurring among the first plurality of agents (see C 37 L 6-21).

**Regarding claim 17**

Nwana teaches wherein the user interface is capable of displaying in addition to the first window, a second window that provides information regarding at least one agent characteristic, and wherein the information displayed in the second window is capable of being altered in response to user commands provided by a user input device selected from the group consisting of a mouse, a keyboard, a touch screen, a voice-response unit, a touch pad and an alternate input device (see C 23 L 52-63).

**Regarding claim 18**

Nwana teaches wherein the information regarding the agent characteristic includes at least one of an agent name, an agent address, an agent filtration, an agent status, an amount of debugging information, an agent capability, and a proportional usage, and wherein an alteration in the information can be provided to a related agent of the multi-agent system (see C 5 L 19-24 and C 6 L 1-10).

**Regarding claim 19**



Art Unit: 2121

Nwana teaches wherein the user interface is capable of displaying, in at least one of the first window and a second window, statistical information regarding amounts of communication occurring among the first plurality of agents (see C 32 L 38-50).

**Regarding claim 22**

Nwana teaches a memory device on which is stored agent operational information that can be used later by the system when operating in the off-line mode (see C 38 L 54-56).

**Regarding claim 24**

Nwana teaches wherein the displayed information regarding the workflow occurring among at least some of the agents is displayed in a tree-type format (see FIG. 11 and FIG. 12).

**Regarding claim 25**

Nwana teaches wherein the information displayed in one of the windows changes when a user input is received causing a change in another of the windows (see C 35 L 55-59).

**Regarding claim 26**

Nwana teaches wherein the plurality of windows includes at least two of a first window that displays a workflow, a second window that displays a list of messages communicated among at least some of the agents, a third window that displays a list of work units, and a fourth window that displays message content (see FIG. 14).

**Regarding claim 27**

Nwana teaches wherein the terminal is further capable of at least one of: modifying the displayed information in accordance with a filter (see C 35 L 60 to C 36 L 6); displaying an additional window in which are displayed a plurality of agent characteristics (see FIG. 14); and displaying statistical information regarding communication load (see C 32 L 38-50).

Art Unit: 2121

**Regarding claim 30**

Nwana teaches wherein the information displayed in one of the first and second windows changes when a user input is received causing a change in the other of the first and second windows (see C 35 L 55-59).

***Response to Arguments***

In the remarks the applicant argues that cited reference fails to teach:

I) “a user interface having a window displaying a workflow among a first plurality of agents” as to claims 1, 23 ad 28.

In response to the applicant’s arguments,

I) Prior art Nwana et al. (U.S. Patent No. 6,266,805) submitted with the IDS filed on 05/09/2006 which discloses displaying the workflow of a plurality of agents interacting with one another in a whole society using a Society Tool and a Report Tool of a visualizer as described in column 32 lines 29-37 and lines 57-67. The Society Tool allows a user to select a set of agents and view the structural organization relationships and the messaging between them as described in column 35 line 1 to column 36 line 37. The Report Tool displays the general behavior of the society as a whole as described in column 36 lines 38-65. Thus, the claims are anticipated by the Nwana reference.

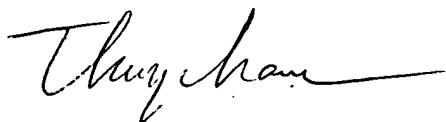
***Conclusion***

6. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 05/09/2006 and the amendment filed on 07/19/2006 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday to Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

**Thomas Pham**  
*Patent Examiner*

A handwritten signature in cursive script, appearing to read 'Thuy Pham', with a long horizontal flourish extending to the right.

October 2, 2006